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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR     | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|--------------------------|---------------------|------------------|
| 10/084,552   | 02/25/2002  | William Michael Lafferty | 11335.2             | 1847             |
| 7590   | 01/21/2004  |                          | EXAMINER            |                  |
| NEIL K. NYDEGGER<br>NYDEGGER & ASSOCIATES<br>348 Olive Street<br>San Diego, CA 92103 |             |                          | SMITH, ZANDRA V     |                  |
|  |             |                          | ART UNIT            | PAPER NUMBER     |
|  |             |                          | 2877                |                  |

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                             |                           |
|------------------------------|-----------------------------|---------------------------|
| <b>Office Action Summary</b> | Application No.             | Applicant(s)              |
|                              | 10/084,552                  | LAFFERTY, WILLIAM MICHAEL |
|                              | Examiner<br>Zandra V. Smith | Art Unit<br>2877          |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-14 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,2,7,8,10 and 11 is/are rejected.
- 7) Claim(s) 3-6,9 and 12-14 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

- Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
  - a) The translation of the foreign language provisional application has been received.
- Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**nt(s)**

ce of References Cited (PTO-892)      4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_ .  
 e of Draftsperson's Patent Drawing Review (PTO-948)      5) Notice of Informal Patent Application (PTO-152)  
 nation Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ .      6) Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 7-8, 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Rahbar-Dehghan (US 6,587,197)*.

As to claims 1, 8, and 10, Rahbar-Dehghan discloses a multiple microchannels chip for biomolecule imaging, comprising:

a plate (10) with a base having a first surface (12) and a second surface (14);  
a plurality of parallel elongated capillary tubes supported by the base (fig. 3), wherein  
each tube defines a lumen extending through the base between the first and second surface,  
further each tube has an inner diameter less than 500 microns (col. 5, line 5), and further wherein  
each tube acts to optically distinguish light directed from inside the lumen toward the interior  
surface from light directed along the axis for optical detection (see fig. 5). Rahbar-Dehghan  
differs from the claimed invention the aspect ratio is not provided; however providing an aspect  
ratio of any order would have been obvious to one having ordinary skill in the art as a means to  
allow diffusion of the particles from the sample at a rate that provides a detectable change in the  
optical properties. Rahbar-Dehghan also fails to provide the density of well, however since  
providing wells at a density would allow for allow for the maximum number of possible wells

while preventing cross-talk, it would have been obvious to one having ordinary skill in the art at the time of invention to provide the claimed density.

As to **claims 7 and 11**, Rahbar-Dehghan discloses everything claimed, as applied above, in addition the plate is used for holding fluorescent samples (col. 3, lines 45-55).

Claims 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Rahbar-Dehghan (US 6,587,197)* in view of *Coffman et al. (US 6,464,942)*.

As to **claim 2**, Rahbar-Dehghan discloses everything claimed, as applied above, with the exception of reference indicia, however to do so is well known as taught by Coffman. Coffman discloses a plate alignment system that includes reference indicia (col. 2, lines 19-30). It would have been obvious to one having ordinary skill in the art at the time of invention to properly position the plate for testing of the samples.

#### *Allowable Subject Matter*

Claims 3-6, 9 and 12-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record, taken alone or in combination, fails to disclose or render obvious, a capillary tube having an interior wall presenting said interior surface to surround and define said lumen; and an outer wall surrounding said interior wall and said lumen for absorbing light directed toward said interior surface of said interior wall, heat treated sleeve glass, interstitial material, or EMA glass.

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

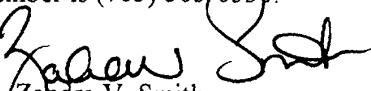
***Schellenberger et al (US 6,306,578).***

*Fax/Telephone Information*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zandra V. Smith whose telephone number is (703) 305-7776. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (703)308-4881. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0530.

  
Zandra V. Smith  
Primary Examiner  
Art Unit 2877

January 8, 2004